

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION**

UNITED STATES OF AMERICA,

*Plaintiff,*

v.

GREG ABBOTT, in his capacity as  
GOVERNOR OF THE STATE OF TEXAS,  
and THE STATE OF TEXAS,

*Defendants.*

Case No. 1:23-cv-00853-DAE

Expert Opinion Report on Rio Grande Navigation and Reasonable Improvements to  
Incrementally Improve Navigation on River Miles 275.5 to 610.0

May 8, 2024  
Supplemented May 29, 2023

Prepared by: Timothy L. MacAllister  
U.S. Army Corps of Engineers  
Fort Worth District  
Chief, Operations Division  
819 Taylor Street  
Fort Worth, Texas 76102-6124

On behalf of: The United States of America

## **I. Summary of Opinions**

- a. The Rio Grande, between river miles 275.5 to 610.0, has sufficient water flows to support navigation of the waterway by Class A and Class I vessels.
- b. The Rio Grande, between river miles 275.5 to 610.0, is presently navigated by Class A and Class I vessels.
- c. Reasonable improvements can be made to the Rio Grande, between river miles 275.5 to 610.0, to enhance and incrementally improve navigation.

## **II. Qualifications**

My name is Timothy L. MacAllister and I am the Chief of Operations for the Fort Worth District, U.S. Army Corps of Engineers. I am responsible for the operation and maintenance of 25 multiple purpose reservoirs across the State of Texas. I began working for USACE in 1995 as a Park Ranger. Over the course of my career, I have held the positions of Park Ranger; Recreation Specialist; Recreation Business Line Manager; Natural Resources Manager; Lake Manager; Operations Project Manager; Deputy Chief of Operations; and Chief of Operations. I have served in temporary assignments as the Chief of Operations for the Southwestern Division and Deputy District Engineer for Programs and Project Management Division for the Fort Worth District. I have also served on training cadres to include as a Motorboat Operators Licensing Course (MOLC) Examiner, and as an instructor for a USACE training course entitled Advanced Administration of Operations and Maintenance Contracts. I have served as the Chief of Operations Division in the Fort Worth District since 2013.

As a Park Ranger and Recreation Specialist, I patrolled lands and waters via vehicles, utility vehicles, all terrain vehicles, bicycles, motorboats, personal watercraft and even canoes. I served as an MOLC Instructor and later, after attending a course held at the Federal Law Enforcement Training Center in Brunswick, GA, I served as an Examiner. The course held in Brunswick, GA was later relocated to the Fort Worth District and we have hosted the training for approximately 10 years at Belton Lake, Bell County, TX. In this course, I taught employees skills to effectively patrol project waters in order to enforce Title 36, Chapter III, Part 327 of the Code of Federal Regulations and to perform maintenance activities on the shoreline, boat ramps, flood control

structures and dams. Patrols and maintenance work are performed from various vessels in areas with as little as 6 inches (for smaller, flat-bottomed or modified vee hull vessels) of water depth. Maintenance activities include providing access to our dam structures, removal of trash/debris, placing of regulatory buoys, conducting boundary line surveillance, loading/unloading equipment and detection of illegal artifact hunters.

In my capacities as Lake Manager and Operations Project Manager, I directed subordinates to accomplish the work above, at times participating as a hands-on member of the crew.

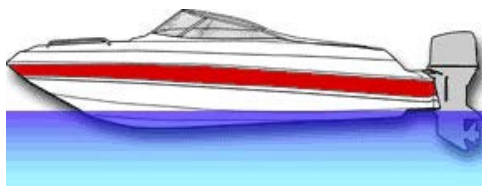
As Deputy Chief of Operations and Chief of Operations, I lead the entire Fort Worth District in accomplishing work, including the type described above, in a programmatic fashion. The multiple purpose reservoirs under my area of responsibility were authorized primarily to provide for flood risk management but also to provide for water supply, hydropower, environmental stewardship and recreation missions. Water supply is provided to water partners via water storage contracts. Our water partners will at times release stored waters downstream for residential, commercial and agricultural uses. When releasing waters at reservoirs with hydropower as a mission, the water release is coordinated as much as feasible to provide for multiple mission benefits...i.e. a hydropower release of water is then utilized downstream for municipal, commercial, agricultural, environmental and recreational uses where possible. Some of these reservoirs are on navigable waterways and others are not. Boating is an activity commonly enjoyed below our dams.

Although I have personal and professional navigation experience, and navigation may be an incidental benefit to authorized project purposes at Corps projects, neither my current nor previous positions are organized within the Regulatory Division of the US Army Corps of Engineers, Fort Worth District. In other words, neither I (as the Chief of Operations) nor the Operations Division generally, is responsible for: (1) navigability determinations under Section 10 of the Rivers and Harbors Act of 1899, (2) reviewing Section 10 permit applications, or (3) granting or denying Section 10 permits.

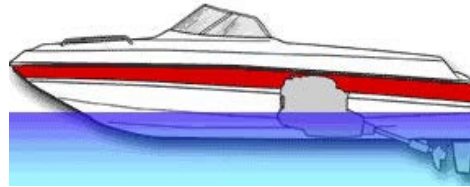
### **III. Navigation on the Rio Grande and Reasonable Improvements to Incrementally Improve Navigation on River Miles 275.5 to 610.0**

#### **a. Vessel Types and Drafts**

Regardless of the length of vessel, a vessels draft must be considered. Whereas an airboat can function in little to no water, vessels with an outboard motor operate in varying depths as little as 4 or 5 inches, especially when also equipped with a trolling motor. A trolling motor is an electric motor attached to the vessel and is used when maneuvering in shallow areas, while fishing and may also be used to assist in holding a vessel in the same location. Vessels may be equipped with various propulsion types to include outboard motors with propellers, inboard motors with propellers, inboard/outboard motors with propellers, air boats with above water propellers and jet drives which utilizes an engine driven water pump to produce thrust from a stream of water.



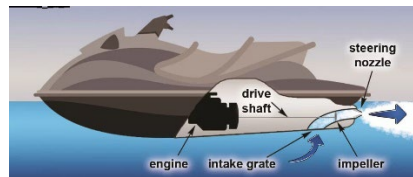
**OUTBOARD MOTOR**



**INBOARD MOTOR**



**INBOARD/OUTBOARD MOTOR**



**JET DRIVE MOTOR**

Jet drive systems are able to operate in shallow waters, especially when used in a personal watercraft. A personal watercraft has a water inlet beneath the vessel and nothing further extends into the water. An airboat can operate in little to no water as the vessel does not have a propulsion unit below the hull. Jet drive systems are also available on outboard motors by replacing the prop and lower unit with a jet drive lower unit. The lower unit is the bottom portion of an outboard motor that contains the drive system.

Self-propelled vessels such as canoes and kayaks are very capable craft to use in shallow waters. These vessels are used for a variety of reasons including fishing, sightseeing, wildlife viewing, leisure paddling and exercise. Vessels such as these can be operated in as little as 3 inches of water and can easily navigate rivers and creeks. I have personally used these vessels with friends and family for fishing, sightseeing and exercise as well as conducting inspections of

wildlife areas not easily accessed by foot or larger vessels. These vessels range in size from a one-person vessel up to 3 or 4 occupants.

b. Flow Variations and Impacts to Navigation

Both Amistad and Falcon Reservoirs, owned and operated by the International Boundary and Water Commission, were built on the Rio Grande to provide flood control and water conservation storage for the benefit of the United States and Mexico. Waters stored in these multipurpose reservoirs is released to provide water for municipal, agricultural and industrial uses, but also provides for the opportunity to produce electricity by releasing these waters through each dam's hydropower plants. By storing water and releasing it in a controlled fashion, this affords the opportunity for the river to continue to provide acceptable navigation flows for Class A (less than 16 feet in length) and Class I vessels (16 feet to less than 26 feet in length).



**CLASS A VESSELS, CANOES AND KAYAKS**



**CLASS I VESSEL, SKI BOAT, RUN ABOUT**

Of course, some periods of the year are better than others with regard to water depths. At times, flows may only support Class A vessels (i.e., vessels less than 16 feet in length, such as canoes and kayaks) while other seasons may support Class I (i.e. vessels 16 to 20 feet in length, such as fishing boats). Excessive flows, such as during a flood event, can also limit the use of a river system for navigation.



**EXAMPLE OF HIGH FLOW AT B.A. STEINHAGEN DAM IN SOUTHEAST TEXAS**

There may be times, just as can happen on any river, that too much flow can shut down a river for navigation until flows return to a manageable rate. During these types of events, river flows can become dangerous from runoff even without releasing water but the risk can become further compounded if releases from the reservoirs are required. Even though a flood event can provide more water flows, too great of a water flow can make vessel handling unsafe by adversely impacting the maneuverability of a vessel, since visually observed hazards can now be under water, new hazards can be created by the water force moving objects, and even the potential of the river cutting new channels.

c. Reasonable Improvements to Enhance Navigation on the Rio Grande between River Miles 275.5-610.0

Navigation of the Rio Grande River between river miles 275.5 to 610.0 can be enhanced by various means to include:

1. Timing water releases for all project purposes to take advantage of other inflow opportunities such as high inflows from the watershed and hydropower needs. This timing of water releases is a basic policy of how the Corps of engineers operates its reservoirs and watersheds through water control manuals. For example, in the Fort Worth District, Sam Rayburn Reservoir and Town Bluff Reservoir are operated as a system to maximize benefits.
2. Clearing/dredging of shoals, or sandbars just below the surface of the water, with backhoes or excavators on land or a barge. Left unmanaged, these areas can restrict

vessel size due to decreased available draft. For example, O.C. Fisher Lake, located in Fort Worth District in Tom Green, Texas, had a water intake silted in resulting in the Fort Worth District clearing and dredging the sedimentation deposit to remove the obstruction for increased water flow.

3. Removal of snags and drift buildup. This includes items such as uprooted trees/vegetation, debris, fencing, trash and the like deposited by river flows. These snags can cause an impediment to navigation but can also cause water flows to re-route and go around the obstacle. If these obstacles remain in the river, the river will find its own way around them and create new channels. These obstacles can also be removed with backhoes and excavators on land or on a floating barge. For example, the picture below is at Lake Whitney. Removing the pictured debris allows water to flow better under the bridge.

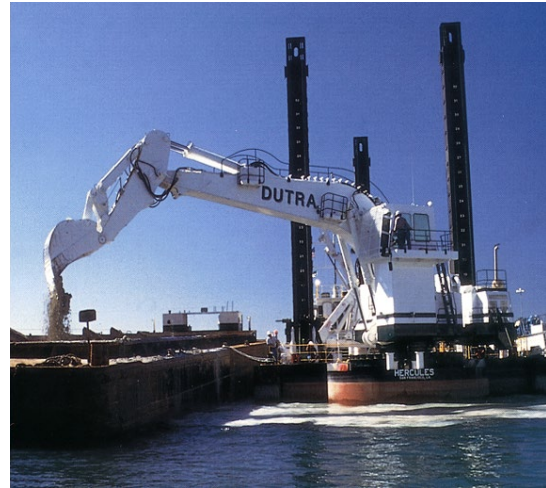


**DEBRIS**

4. Dredging of naturally shallow stretches of the river to maintain water depths if needed. I consider a shallow stretch to be any depth that is not passable for the intended use or size of vessel. This can be accomplished through the use of backhoes or excavators on land or a floating barge. For example, at Wright Patman Lake, our water partners have asked to dredge to increase water flow to their intake structures. Additionally, other USACE districts dredge specifically for navigation in rivers.



**CLAM SHELL DREDGE**



**BACKHOE DREDGE**

5. Providing for bank stabilization by establishing a stable slope with appropriate vegetative cover or potentially armoring the banks with large rock (riprap), concrete or hardened structure to reduce riverbank sloughing. Sloughing can lead to the river meandering and adding sediment load. Increased sediment in the system will eventually settle, particularly where water slows, and can decrease available draft. For example, currently there is a contract at Sam Rayburn Lake placing riprap to maintain the integrity of the dam. Without such armoring in front of and behind the dams there is sloughing/erosion of the banks which can increase sedimentation, create blockages, and lower flows.



**RIPRAP TO PROTECT AGAINST EROSION**



**PLACING RIPRAP**

6. Conduct plant species control to remove large areas of dense vegetation which can become an obstacle, slow the water and cause the river to attempt to re-route. At times, vegetation may grow so dense into a water way that it can take over an area

and gradually interfere with navigation. Carrizo Cane, for example, is a big problem in the Rio Grande. It is thick enough that it can force the river to slow down, spread out, and change course. Removal of it, like the Carrizo Cane State eradication effort, can therefore increase the flow rate, slow sedimentation, and provide benefits for navigation.

7. Improve existing and add additional boat ramps and access areas for canoe and kayak launches, to allow for greater utilization of the river. Improvements may include dredging around boat ramps to remove sediment, add additional boat ramp launching lanes, extending boat ramp launching lanes further into the water, extending boat ramp launching lanes to higher ground and establishing different launching areas for motorized versus non-motorized vessels. In 2020, the Fort Worth District added an additional canoe and kayak launch to the river side of the Waco Dam. The addition resulted in increased use of Class A vessels as pictured.



**CANOE/KAYAK LAUNCH**



**CANOE/KAYAK LAUNCH**

Similarities of navigating this area of the Rio Grande can be drawn to the waterways below various Fort Worth District multiple purpose reservoirs. For example, Lewisville Lake, which is owned and operated by the US Army Corps of Engineers in North Texas, releases water to customers downstream. When doing so, the releases are typically made through the hydropower unit. Kayak and canoe enthusiasts utilize these releases to navigate the Elm Fork Branch of the Trinity River. Releases between 50 – 200 cubic feet per second are ideal, but much of the Elm Fork can be navigated with little to no releases. If the reservoir is in a flood status, where waters are in excess of the water partners storage volume, the US Army Corps of

Engineers determines when to release water downstream. These releases are performed when downstream conditions allow for those releases to not cause flood damages.

In southeast Texas, the US Army Corps of Engineers owns and operates the Sam Rayburn Reservoir on the Angelina River. The Sam Rayburn Dam location and upstream to US Highway 59 is determined to be navigable. At Sam Rayburn, the US Army Corps of Engineers routinely produces hydropower and sends water downstream to our water storage customers. When doing so, navigation is enhanced and allows for canoes, kayaks, and motorboats of various sizes to utilize the river between Sam Rayburn and Town Bluff Lakes for eco-tourism, fishing and pleasure boating. These same opportunities then exist below Town Bluff.

The US Army Corps of Engineers owns and operates Whitney Reservoir located on the Brazos River in the central part of Texas. Releases from the dam are made for hydropower activities, water supply and flood events. Water supply and hydropower releases are coordinated with our partners and flood releases are made at the discretion of the US Army Corps of Engineers. These releases are at times limited, reducing the depth of the river which in turn can reduce usability of the navigable waterway. Other times, releases may be too great to support safe navigation.

d. Present Navigation on the Rio Grande between Eagle Pass, Texas and Laredo, Texas

For the instances above, just as is the case for the Rio Grande, sufficient water flows are typically present to support navigation of the waterway via a Class A vessel and much of the time, Class I vessels, as well.

As stated above, too little or too great a flow can negatively impact navigation, but in all but extreme instances such as severe drought or significant flooding events, navigation on the Rio Grande between Eagle Pass and Laredo can and does occur at some level. In some instances, experienced rafters and vessel operators can and do operate in above average flows. An internet search of “Eagle Pass Rio Grande Kayak”, “Eagle Pass Rio Grande Boat”, “Laredo Rio Grande Kayak” and “Laredo Rio Grande Boat” results in numerous links to news stories, images and even vessel rental business all on the Rio Grande River. The quantity and type of results found provide evidence to suggest the Rio Grande River is navigated frequently and during different times of the year. Law enforcement activities conducted via vessels as well as the recreating

public utilize the river in vessels throughout the river system. These results show evidence of vessels from Class A to at least Class I such as the 20 ft Air Ranger Air boats and 20 ft SJX drive boats, 18 ft American Ranger, Zodiac: F-530-AIB, John Lowe Boats - model L1648/M used by TPWD and DPS, and in some instances, depending on the location, even larger. Furthermore, these activities can be further enhanced by implementing the improvements described above.

#### **IV. Facts, Data, Documents Considered**

- 2024 Motorboat Operators License Examiner Instructor Manual
- Navigable Waters of the United States in the Fort Worth, Albuquerque, and Tulsa Districts Within the State of Texas (December 20, 2011)
- Navigability Study: Rio Grande, Tributaries, and Lakes, Rio Grande Basin River Mile 275.5 to 610.0 (March 31, 1975)
- Information on the USIBWC operation and maintenance division, water accounting division, and security division watercraft and equipment assets on the Rio Grande.
- Information on Customs and Border Protection and U.S. Border Patrol watercraft assets and operations on the Rio Grande, including near Eagle Pass.
- Hydro-Electric Power Plants and Storage Dams - IBWC.
- Internet search of “Eagle Pass Rio Grande Kayak,” “Eagle Pass Rio Grande Boat,” “Laredo Rio Grande Kayak,” and “Laredo Rio Grande Boat.”
- Defendants’ objections and Answers to Plaintiff’s First Set of Interrogatories.
- Carrizo Cane State Eradication Program. <https://www.tsswcb.texas.gov/programs/rio-grande-carrizo-cane-eradication-program>.
- Observations from May 21, 2024 visit to site of floating barrier and vicinity in Eagle Pass, Texas.
- Expert Report of Adrian Cortez (May 10, 2024).

#### **V. Statement of Expert Opinion**

Based on the 29 years of experience I have developed in numerous positions with the U.S. Army Corps of Engineers, Motorboat Operators Licensing Course Instructor, personal familiarity

with navigating Class A and Class I vessels, and the facts, data, and documents I considered as outlined in section IV. of this report, it is my opinion that:

- The Rio Grande, between river miles 275.5 to 610.0, has sufficient water flows to support navigation of the waterway by Class A and Class I vessels.
- The Rio Grande, between Eagle Pass, Texas and Laredo, Texas, is presently navigated by Class A and Class I vessels.
- Reasonable improvements can be made to the Rio Grande, between river miles 275.5 to 610.0, to enhance and incrementally improve navigation.

**VI. Previous Expert Testimony**

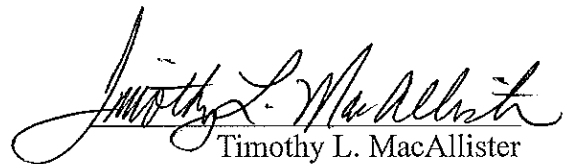
I have not given deposition or trial testimony in the last five years.

**VII. Statement of Compensation**

I am an employee of the United States Army Corps of Engineers and have not received compensation beyond my annual salary and benefits.

**VIII. Signature**


I, Timothy L. MacAllister, considered the facts, data, and documents cited in Section IV of this report and reached the conclusions and opinions contained herein.

A handwritten signature in cursive script, reading "Timothy L. MacAllister".

Timothy L. MacAllister  
Chief, Operations Division  
Fort Worth District  
U.S. Army Corps of Engineers

May 29, 2024 Supplementation

This supplemental report includes the two additional sources listed in Section IV, which became available to me after the signature of my May 8, 2024 report. These additional sources reaffirm the opinions stated in my May 8 report and do not alter any of the opinions expressed in that report.

  
Timothy L. MacAllister  
Chief, Operations Division  
Fort Worth District  
U.S. Army Corps of Engineers

## **Appendix A – Additional Rule 26(a)(2) Disclosures**

### Facts and Data Considered

All facts and data considered in the drafting of this report are listed in Part IV of this report.

### Exhibits to Summarize or Support Opinions

All exhibits that will be used to summarize or support the opinions contained in this report are included in this report.

### Qualifications

My qualifications are described in Part II of this report and in the attached CV. I have not authored publications in the previous 10 years.

### Expert Witness Testimony over Past 4 Years

I have not testified as an expert witness during the previous 4 years.

### Compensation

I am not being compensated for my testimony.



## PROFILE

Dedicated and ambitious leader of a multidisciplinary team stationed across the majority of Texas. I plan, direct and lead the team in the operations and maintenance of 25 multipurpose reservoirs through mentoring, coaching and teaching. Additionally, I have partnered with municipal, state and federal entities for enforcement and maintenance activities.

Not only have I performed the duties needed to care for these projects myself, I have also taught Motorboat Operator Licensing Course as an Examiner and have instructed across all of USACE the Advanced Administration of Operations and Maintenance Contracts.

## CONTACT

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Tim.L.MacAllister@usace.army.mil

## HOBBIES

Enjoying the outdoors with family and friends while boating, fishing, and sightseeing.

# TIMOTHY L MACALLISTER

Chief, Operations Division  
Fort Worth District  
U.S. Army Corps of Engineers

## EDUCATION

### **Tarleton State University**

1993 – 1996

Bachelor of Science, Range and Ranch Management  
President, Tarleton Range Club

### **Fort Worth District, Motorboat Operator Licensing Course**

08/07/1995

### **U.S. Army Corps of Engineers, Motorboat Operator Licensing Examiner**

06/23/1998

## WORK EXPERIENCE

### **US Army Corps of Engineers, Park Ranger and Recreation Specialist**

**04/14/1995 – 04/07/2006**

Enforced CFR Title 36, Chapter III, Part 327 on multipurpose reservoirs. Routine operation of various wheeled vehicles and Class I vessels to perform maintenance activities on land and water.

### **US Army Corps of Engineers, Lake Manager, Lewisville Lake**

**08/20/2006 – 03/29/2008**

Planned and directed the work of a multidisciplinary workforce in the Operations and Maintenance of Lewisville Lake regarding flood risk, water supply, recreation and environmental stewardship missions.

### **US Army Corps of Engineers, Operations Project Manager, Trinity Region**

**03/30/2008 – 08/29/2009**

Planned and directed the work of a multidisciplinary workforce in the Operations and Maintenance of 7 multipurpose reservoirs in the DFW area.

### **US Army Corps of Engineers, Deputy Chief of Operations, Fort Worth District**

**08/30/2009 – 10/06/2013**

and

### **U.S. Army Corps of Engineers, Chief of Operations, Fort Worth District** **10/07/2013 – Present**

Planned and directed the work of a multidisciplinary workforce in the Operations and Maintenance of 25 multipurpose reservoirs.